



DEPARTMENT OF THE NAVY

TRAINING AIR WING ONE  
101 FULLER ROAD STE 250  
MERIDIAN, MS 39309-5403

REVISION: AUG 11

TRAINING AIR WING TWO  
614 MCCAIN ST. SUITE 310  
KINGSVILLE, TX 78363-5038

## TW-1/2 TAC ADMIN OPERATING PROCEDURES

### ON DECK

**Preflight** – Two-digit tactical callsigns will be used on all multi-plane events. Division flights may use “Dash #” when appropriate and properly briefed.

**Communications** – Radios will be referred to as PRI (Primary) and AUX (Auxiliary) for Comm1 and Comm 2 respectively.

### **Element Check-in**

Comm checks shall be initiated by lead as follows:

Lead (AUX):           *“Hammer, check-in AUX, Hammer 11”*  
Dash-2 (AUX):       *“Hammer 12” (in order)*

Leads will then pass the clearance, squawk, and conduct the alpha check to a common reference waypoint (preferably bullseye).

Lead (AUX): *“Hammer, cleared..., squawking XXXX, alpha check (Bullseye), XXX/XX, (azimuth and range from waypoint).”*

Silence will be consent from all flight members for a valid alpha check. The verbalized azimuth and range from “Bullseye” should be within 3 degrees, and .5 NM of what is indicated in each respective cockpit.

Any member of the flight may advise lead of an alpha check discrepancy as follows:

Wing (AUX): *“Hammer 12 shows (Bullseye) XXX/XX (azimuth and range from waypoint)”*

**Frequency Changes** – Lead will initiate checks on safety of flight frequencies (area common) but not on ATC frequencies. Wingmen will reply in order.

Lead (AUX):           *“Hammer, check-in PRI”*  
Lead/Wing (PRI):    *“Hammer 11” (in order)*

**IFF** – Set 3/C per the clearance or as briefed.

**CVRS / VTR** – Check/Set per NATOPS/SOP.

**A/A TACAN** (when utilized) – Check TACAN operation referencing the home field nav aid then switch to A/A TACAN. For T-45C's on air to air flights, TCN shall be boxed unless WPT is required on specific sets.

**SMS** – For **ALL A/A and A/G** flights, set up the SMS page as follows (or as briefed):

A/A – RTGS and 31ft WSPN

A/G – BOMB, CCIP, 4 per side, and THGT as the field elevation

### **DEPARTURE/TRANSIT**

**Rendezvous-** All initial rendezvous will be to the parade position. After the flight has joined, leads will direct the flight to the pre-briefed formation for the transit to the working area.

**Environmentals** – (Intermediate TAC and all advanced stages) All flight members shall assess and record the items listed below once in the operating area. If environmentals are not as briefed, the lead may adjust the flight conduct as required.

- a. Sun azimuth and elevation.
- b. Cloud decks in operating area.
- c. Winds at altitude in operating area.

### **G-warm**

(TACF / BFM / SEM) –

- With the lead and wingman at an appropriate altitude, 1.0 abeam and 300 KIAS:

Lead: *“Hammer, reference XXX, accel G-warm”*

- Lead will unload to ~7 units AOA at MRT until 10 degrees nose low.
- Wing will unload to maintain lead on horizon at MRT.
- At 350 KIAS Lead will initiate the first 90 degree turn with

*“Hammer, 90 right/left, go”*

- Both aircraft roll and set a 4G, 10 degree nose low turn for 90 degrees of heading change in which ever direction lead called. After 90 degrees of turn, both aircraft will roll wings level staying nose low until 400 KIAS then pitch up to level flight attitude.
- Lead will initiate the second turn with

*“Hammer, resume”*

- The section will then execute the second half of the G-warm back to the original heading, for 90 degrees of heading change. Both aircraft will perform a level G-warm peaking to 6Gs then ease and maintain 4Gs. Both aircraft have one attempt to achieve 6Gs then must ease the pull to sustain 4Gs.
- Both aircraft will then proceed to the PADS as required.
- Each aircraft shall place the Master Arm switch to ARM.
- SEM will perform the G-warm as indicated above with the bandit in a Tac-Wing position on Hammer 11.

### **Fence In –**

Reaching the operating area, each aircraft will execute the fence in procedures with the exception of placing the Master Arm switch to ARM.

(TAC / BFM / SEM) - Lead will fence in the flight after completing the G-warm.  
(Master Arm to ARM, trigger will NOT BE PULLED to test for a tone)

(STK / 2PL ONAV) - Lead will fence in the flight as briefed.

Lead (AUX): *“Hammer 11, fenced in X.X, good G” (Fuel state in thousands of pounds, alibis by exception)*

Wing (AUX): *Wingmen will echo leads call.*

The “Fenced In” call completes the TACADMIN phase of flight, indicating that all members are ready for the combat phase and have completed an assessment of themselves, the environment, their aircraft, weapons, and systems.

## **MISSION CONDUCT**

### **(WEPS/STK)**

Strike flights (WEPS in .159 syllabus) will adhere to TACSOP before and after fence checks. For the conduct portion of the flight, refer to the Strike FTI for specific procedures. (Note: Ops Checks will continue to use the “Fuel and G” format.)

### **Ops Checks (Fuel and G)**

Leads will be responsible for initiating ops checks periodically throughout the flight. They will occur when briefed for each stage during non-maneuvering phases of flight in the following format: Fuel (in lbs), then ‘G.’ If max G in the HUD indicates an overstress (>7.3 above 5k or >6.5 below 5k), RTB in accordance with SOP. Otherwise, say “good G.”

(AUX): *“Hammer 11, 2.1, good G” (repeat in order)*

### **Knock-It-Off (KIO)**

Anyone in the flight can call a KIO if an unsafe situation develops or if a training rule is violated. As most mid-air collisions occur post-KIO, it is important to continue to maintain SA while redressing the flight. Ops checks will not occur until the flight is safely de-conflicted and flowing in the same direction.

When training objectives have been met, the briefed evaluating instructor (typically the trunk IP) will call a KIO. All aircraft will cease maneuvering and maintain SA while de-conflicting flight paths. When all aircraft are safely de-conflicted, lead will provide a flow heading to redress the flight, if one has not already been provided.

Anyone (AUX): *"Knock-it-Off, Knock-it-Off"*  
 Lead (AUX): *"Hammer 11 Knock-it-Off"*  
 Remainder of flight (AUX): *"Hammer 12 Knock-it-Off"* (in order)  
 Lead (AUX): *"Hammer, Flow 270"* (if flow not already provided)  
 Remainder of flight (AUX): *"Hammer 12, 270"* (in order)

If any "flow" calls are unclear, continue to de-conflict flight paths. Avoid blind lead turns.

Anyone (AUX): *"Say again flow"*  
 Lead (AUX): *"270"*

### **Section Engaged Maneuvering (SEM)**

The bandit will call the KIO for training objectives.

Bandit (AUX): *"Knock-it-Off, Knock-it-Off"*  
 Bandit (AUX): *"Viper 1 Knock-it-Off"*  
 Tac Lead (AUX): *"Hammer 11 Knock-it-Off"*  
 Wing (AUX): *"Hammer12 Knock-it-Off"*  
 Bandit (AUX): *"Hammer, Flow 270"*  
 Remainder of flight (AUX): *"Hammer 11, 270"* (in order)

### **RECOVERY**

#### **Fence Out/Join-up**

(TACF / BFM / 2PL ONAV)- Wingman will stay in DCS until after the tactical portion of the flight is complete at which point lead will direct the final join up by calling for the flight to fence out. Each aircraft will fence out prior to joining. Wingman will initially join in the parade formation.

Lead (AUX): *"Hammer fence out"*  
 (Wingman auto-cleared to join)  
 Wing (AUX): *"Hammer 12"*

(STK)- Wingman will conduct the Off Target Rendezvous as briefed. Once all wingmen have sight of all appropriate players, lead will direct the flight to fence out. Each aircraft will fence out prior to joining.

Lead (AUX): *"Hammer fence out"*  
 Wing (AUX): *"Hammer 12"(In order)*

(SEM)

Bandit (AUX): *"Hammer fence out"*  
 Tac Lead (AUX): *"Hammer 11 joining on the left/right"*  
 Wing (AUX): *"Hammer 12 joining on the right/left"*

### **Battle Damage Checks**

(TACF / BFM / SEM / 2PL ONAV) –Leads will initiate battle damage checks via cocked gun hand signal. Battle damage checks will be done by section. The wingman will step out to a cruise distance from Lead, elevate to check the top, descend and cross under checking the belly, and then elevate on the other side checking the top again, remaining on that side. The wingman shall pass thumbs up or communicate any problems. Lead will pass the lead to the wingman, execute the battle damage check, and be given the lead back upon completion. Lead will maintain responsibility for ATC/Safety of Flight frequency communications throughout the battle damage checks.

If the formation is a flight of three, checks will be initiated from fingertip formation. Dash 3 will step out to a cruise distance, elevate to check the top of Lead, descend and cross under Lead and Dash 2 to check the bellies, elevate on the other side checking the top of Dash 2, and then return to the original position in the formation. Dash 2 will then step out to a Cruise distance, cross under to check the belly of dash 3, elevate to check the top of -3 and return to the original position.

(STK)- Battle damage checks will not be conducted during Strike events. However, all Strike wingmen will check out all players already in the formation during the Off Target Rendezvous join and will communicate any problems with any airplane already in formation.

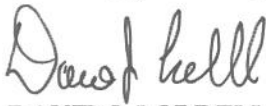
Lead will then initiate the "fenced out" call:

Lead or Bandit (AUX): *"Hammer 11 or Viper 1, fenced out, X.X, good G"*  
 Flight members respond in order. No amplification of jet status is required if the aircraft is "up". If the aircraft is down, use plain language to indicate mission incapable status.

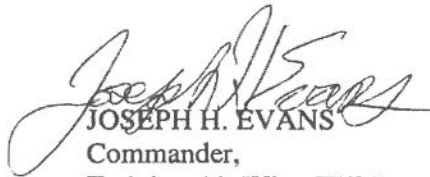
Wing (AUX): *"Hammer 12, fenced out, X.X, good G, down for GINA"*

The flight will then be placed into the formation of lead's discretion.

**Action.** All aircrew flying TW-1 and TW-2 T-45 aircraft shall familiarize themselves and comply with the procedures contained in the this instruction.



DAVID J. LOBDELL  
Commander,  
Training Air Wing ONE



JOSEPH H. EVANS  
Commander,  
Training Air Wing TWO

# FORMATIONS

## Section Formations

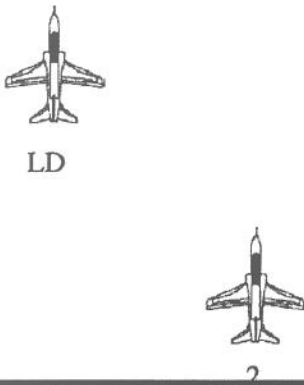
### ATC Spread

- ATC assigned altitude
- .7-1.0nm



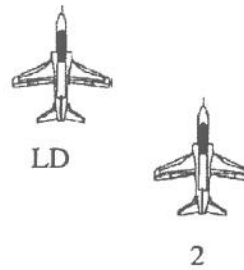
### Tac Wing

- 30-60deg
- .2-.7nm
- +- 1,000ft



### Admin Cruise (Division Formations also)

- Sight down vortex generators
- 1 plane in between
- Equal amount of top/bottom of wing



## Division Formations

### Fluid 4

- -3 DCS
- -2 & -4 Tac Wing
- For ATC transit
  - -3 ATC spread
  - -2 & -4 admin cruise

